

REMARKS

Applicants are filing the amendments above and the remarks that follow to address all issues raised in the October 21, 2002 Office, and thereby provide a complete response to that Action. Claims 7, 9, 10, 12, 14, 15, 18, 20, 21, 24, 27, 29 and 33-49 remain active in this case. Prompt favorable reconsideration is solicited.

Claim 40 has been amended to eliminate minor grammatical errors, so that the phrasing clearly refers to "despreading the received spread-spectrum signals and detecting transmitted data." This amendment, however, should not change the scope of the amended claim.

Applicants note with appreciation that the Examiner has maintained the allowance of claims 7, 9, 10, 12, 14, 15, 18, 20, 21, 24, 27, 29 and 33-42 and that the Examiner has also allowed claims 47-49.

Remaining claims 43-46 stand rejected on prior art grounds. Independent claims 43 and 44 have been amended to more clearly specify distinctions over the applied art. Although in somewhat different form, each of claims 43 and 44 has been amended to specify "discrete" power levels. Dependent claim 46 is amended to conform to the amended language of parent claim 44. References to "discrete" power levels appear in several of the allowed claims (e.g. claims 31 and 38). Hence, it is believe that the "discrete" power level terms in claims 43, 44 and 46 are fully supported by the original disclosure and are sufficiently clear and definite, as were the similar terms in the earlier presented allowable claims.

Applicants' representative wishes to thank Examiner Bocure for the courtesy extended during the telephone interview conducted on December 12, 2002. Claims 43 and 44 were discussed and compared to the disclosure of applied patent 5,841,768 to Ozluturk et al. However, no agreement was reached with regard to patentability.

The Art Rejections

Claims 43, 44 and 46 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent 5,841,768 to Ozluturk et al. (hereinafter the Ozluturk Patent). The Ozluturk Patent discloses certain power ramp-up techniques for use in the access phase of a wireless communication, implemented in a CDMA network, for example, for wireless telephone service. In each embodiment, Ozluturk continuously transmits one or more preambles, and during each of the preamble transmissions, Ozluturk continuously ramps-up the transmit-power although there may be a change in the angle of the ramp upon detecting an initial acknowledgement. Figs. 5 and 7 show the power curves, for the two continuous ramp-up embodiments. The Examiner specifically relies on the processing described with reference to Fig. 4, which utilizes a continuous increase in transmission power during the ongoing preamble transmissions (see step 108), essentially as shown in Fig. 5 (see column 6, lines 44-67; and column 7, lines 1-12).

Claim 45 stands rejected under 35 U.S.C. § 103 as obvious over the Ozluturk Patent. The Examiner acknowledges that the Ozluturk Patent does not disclose terminating preamble transmission after a maximum number of such transmissions. The rejection includes an allegation that imposing a time limit on access transmissions is well known and therefore it would have been obvious to impose a time limit by ceasing "power ramp codes" (presumably referring to the claimed preamble transmissions) after a maximum number of attempts.

Patentability of Claims 43-46

The art rejections are traversed, particularly to the extent if any that they might apply to claims 43-46 as they stand after entry of the above amendments. It is believed that claims 43-46 now patentably distinguish over the Ozluturk Patent.

As noted in the discussion of the rejections, the Ozluturk Patent only discloses continuous power ramp-up, during continuous preamble transmissions, until the mobile station receives an acknowledgement from the base station. It is submitted that the “discrete” power level language of amended independent claims 43 and 44 expressly excludes coverage of a system such as that of Ozluturk that uses continuous power ramp-up.

Amended independent claim 43 specifies transmitting a first preamble at a first discrete power level, and if no acknowledgment corresponding to the transmitted preamble is received within a time following the transmission of the first preamble, transmitting a second preamble at a second discrete power level. The second discrete power level that is higher than the first discrete power level. A continuous power ramp-up as in the Ozluturk patent does not provide two preamble transmissions at two different discrete power levels, where the second discrete power level is higher than the first discrete power level.

Amended independent claim 44 specifies transmitting a preamble at a discrete power level. In this claim, if an acknowledgment is not received upon expiration of an interval following the preamble transmission, power level is increased to a new discrete power level, and the transmitting step is repeated. This sequence of transmitting at a discrete power level, increasing to a new discrete level and again transmitting is not found in or satisfied by a continuous power ramp-up, as in the Ozluturk patent.

Since the continuous power ramp-up of Ozluturk does not meet the requirements for “discrete” different power levels specified in independent claims 43 and 44, that Patent does not anticipate either of those claims or dependent claim 46. Claim 45 depends from claim 44 and thereby incorporates the discrete power level limitations; and the proposed modification of Ozluturk would still not meet the discrete power level limitations. Hence, the rejection of claim 45 also should be withdrawn.

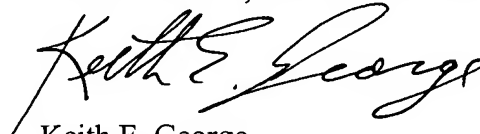
Claims 43-46 therefore should be in condition for allowance, along with the other pending claims. It is believed that this application is in condition for allowance, and a prompt notice to that effect is solicited.

It is submitted that the amendments and remarks above address all issues raised in the October 21, 2002 Office Action and place this case in condition for allowance. However, if any further issue should arise, which may be addressed in a further interview or by an Examiner's amendment, Applicants request that the Examiner telephone their representative at the number shown below.

To the extent necessary, if any, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Keith E. George", written in a cursive style.

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Marked-Up Versions of Amended Claims

Claims 40, 43, 44 and 46 have been revised as shown in the marked up copies below, wherein deletions are bracketed and additions are underlined.

40. (Amended) The base-band processor as set forth in claim 39, wherein the demodulator comprises:

an analog-to-digital converter for converting received spread-spectrum signals from an antenna to a digital signal; and

means responsive to the digital signal from the analog-to-digital converter for despreading the received [and] spread-spectrum signals and detecting [the] transmitted data.

43. (Amended) A method of operation of a code-division-multiple-access (CDMA) system employing spread-spectrum modulation, with the CDMA system having a base station (BS) with a BS-spread-spectrum transmitter and a BS-spread-spectrum receiver, and a plurality of remote stations, with each remote station (RS) having an RS-spread spectrum transmitter and an RS-spread-spectrum receiver, the method comprising the steps of:

transmitting a broadcast common-synchronization channel, from the BS-spread-spectrum transmitter located at the base station to the plurality of remote stations;

receiving at a first RS-spread-spectrum receiver the broadcast common-synchronization channel, and determining a plurality of parameters required for transmission to the base station;

transmitting from a first RS-spread-spectrum transmitter a first preamble at a first discrete power level;

if no acknowledgment corresponding to the previously transmitted preamble is received at the first RS-spread-spectrum receiver by a time following the transmission of the first

preamble, transmitting from the first RS-spread-spectrum transmitter a second preamble at a second discrete power level that is higher than the first discrete power level;

receiving the second preamble, at a detected-power level, at the BS-spread-spectrum receiver;

transmitting an acknowledgment of the received preamble from the BS-spread-spectrum transmitter;

receiving the acknowledgment at the first RS-spread-spectrum receiver; and

transmitting a spread-spectrum signal having data from the first RS-spread spectrum transmitter to the BS-spread-spectrum receiver, responsive to the receipt of the acknowledgment.

44. (Amended) A method of communication through a code-division-multiple-access (CDMA) system employing spread-spectrum modulation, with the CDMA system having a base station (BS) with a BS-spread-spectrum transmitter and a BS-spread-spectrum receiver, and a plurality of remote stations, with each remote station (RS) having an RS-spread spectrum transmitter and an RS-spread-spectrum receiver, the method comprising the steps of:

receiving a broadcast common-synchronization channel from the BS-spread-spectrum transmitter located at the RS-spread-spectrum receiver of one of the remote stations, and determining a plurality of parameters required for transmission to the base station;

transmitting a preamble at a [set] discrete power level from the RS-spread-spectrum transmitter of the one remote station;

listening for an acknowledgment corresponding to the transmitted preamble at the RS-spread-spectrum receiver of the one remote station;

if an acknowledgment is not received, upon expiration of a predetermined interval, following the transmission of the preamble, increasing power level to a new [set] discrete power level, and repeating the transmitting step and continuing the listening step;

upon receiving an acknowledgment at the RS-spread-spectrum receiver of the one remote station, ceasing preamble transmission and transmitting a spread-spectrum signal having data from the RS-spread-spectrum transmitter of the one remote station, for the BS-spread-spectrum receiver.

46. (Amended) The method of claim 44, wherein if the steps of transmitting the preamble and listening for the acknowledgement repeat a plurality of times, the increasing of the power level to a new [set] discrete power level will repeat until power level reaches a maximum value.